In the Claims

1-12. (Canceled)

13. (Original) A method of assessing the efficiency of a modulator of a PP2A phosphatase comprising a PP2A/Bγ subunit for the treatment of a mental disorder, said method comprising administering said modulator to an animal model for said mental disorder; wherein a determination that said modulator ameliorates a representative characteristic of said mental disorder in said animal model indicates that said agonist is a drug for the treatment of said mental disorder.

14. (Original) The method of claim 13, wherein said animal model is the STOP-/- mice with synaptic defects and severe behavioral disorders.

15. (Currently Amended) The method of ~~claims 13 or 14~~claim 13, wherein said modulator specifically modulates a PP2A phosphatase comprising the PP2A/Bγ subunit.

16. (Currently Amended) The method of ~~any of claims 13 to 15~~claim 13, wherein said mental disorder is selected from the group consisting of bipolar disorder, schizophrenia and depression.

17. (Original) The method of claim 16, wherein said mental disorder is bipolar disorder.

18-42. (Canceled)

43. (New) A method of screening candidate modulator compounds of a Protein Phosphatase 2A (PP2A) phosphatase comprising the steps of:

a) contacting PP2A/Bγ or a PP2A phosphatase comprising a PP2A/Bγ subunit with the candidate modulator compound; and

b) testing the activity of PP2A/Bγ or of the PP2A phosphatase comprising a PP2A/Bγ subunit in the presence of said candidate compound,

wherein a difference in the activity of PP2A/Bγ or of the PP2A phosphatase comprising a PP2A/Bγ subunit in the presence of said compound in comparison to the activity in the absence of said compound indicates that the compound is a modulator of PP2A/Bγ or of the PP2A phosphatase comprising a PP2A/Bγ subunit.

44. (New) The method according to claim 43, wherein a PP2A/Bγ subunit is contacted with the candidate modulator compound.

45. (New) The method according to claim 43, wherein said candidate modulator compound is selected from the group consisting of a natural ligand, a small molecule, an antibody, an antisense RNA, an aptamer and a short interfering RNA.

46. (New) A method of treating a mental disorder comprising the administration of a modulator of a PP2A phosphatase to an individual in an mount effective to treat said mental disorder.

47. (New) The method according to claim 46, further comprising the administration of a known drug for said treatment of said mental disorder.

48. (New) The method according to claim 46, wherein said modulator is a gene therapy vector comprising a polynucleotide encoding a PP2A/Bγ subunit.

49. (New) The method according to claim 46, wherein said mental disorder is selected from the group consisting of bipolar disorder, schizophrenia and depression.

50. (New) A method comprising determining the identity of a nucleotide at a PP2A/Bγ-related biallelic marker or the complement thereof in a biological sample.

51. (New) The method according to claim 50, wherein said biological sample is derived from a single individual.

52. (New) The method according to claim 51, wherein the identity of the nucleotides at said biallelic marker is determined for both copies of said biallelic marker present in said individual's genome.

53. (New) The method according to claim 52, wherein said determining is performed by a microsequencing assay.

54. (New) The method according to claim 52, further comprising amplifying a portion of said sequence comprising the biallelic marker prior to said determining step.

55. (New) The method according to claim 54, wherein said amplifying is performed by PCR.

56. (New) The method according to claim 50, wherein said genotyping step identifies a PP2A/Bγ-related biallelic marker selected from the group consisting of 99-24169/139, 24-257/320, 99-24175/218 and 24-247/216 (as depicted in table 3A) and the complements thereof.

57. (New) The method according to claim 56, further comprising the step of correlating the result of the genotyping step with a risk of suffering from a mental disorder.

58. (New) The method according to claim 57, wherein presence of a genotype "AA" at biallelic marker 99-24169/139 is indicative of a risk of suffering from a mental disorder.

59. (New) The method according to claim 57, wherein the presence a haplotype "AG" at biallelic markers 24169/139 and 24-247/216 is indicative of a risk of suffering from a mental disorder.

60. (New) The method according to claim 57, wherein presence of a haplotype "AA" at biallelic markers 24-257/320 and 99-24175/218 is indicative of a risk of suffering from a mental disorder.

61. (New) The method according to claim 57, wherein said mental disorder is selected from the group consisting of bipolar disorder, schizophrenia and depression.

62. (New) The method according to claim 61, wherein said mental disorder is bipolar disorder.